limitations of the BOC's interfaces or processes, or by other factors the BOC may influence." *Id.* The Commission has determined that it "will examine operational evidence to determine whether the OSS functions provided by the BOC to competing carriers are actually handling current demand and will be able to handle *reasonably foreseeable demand volumes*." *Michigan Order* ¶ 138 (emphasis added).

BellSouth has not demonstrated that its pre-ordering systems are operationally ready. BellSouth represents that it has internally tested LENS to support 160 simulated users.[42] However, the existing capacity appears to be woefully inadequate for either existing[43] or foreseeable demand. Because BellSouth's OSS operates region wide, the user figures are for the total number of simultaneous users among for all CLECs throughout BellSouth's region. It would appear that competitively significant marketing efforts would quickly exhaust available capacity.

Neither has BellSouth demonstrated that its ordering systems are operationally ready, especially in light of the manual processes involved. BellSouth states that it received and processed only about 5,000 orders region wide in August. This total volume is only a fraction of the volume

---

[42] Stacy OSS Aff. Ex. WNS-45.

[43] AT&T reports a recent incident in which less than half of sixty users could adequately use LENS. AT&T Bradbury Aff. ¶ 258; *see also id.* ¶¶259-61; MCI King Decl. ¶ 86. If the total number of LENS users at that point in time was no greater than 160, this suggests that BellSouth's testing was flawed. If the total number was greater than 160, then usage has already exceeded tested capacity.

at which Pacific Bell and Ameritech systems failed due to their reliance on manual processing,[44] and BellSouth has experienced major problems with errors at even this low volume.[45]

If one considers foreseeable volumes, the situation is even more problematic. According to BellSouth's October 20, 1997, 8-K filing with the SEC, BellSouth currently has nearly 23 million access lines in its region, having added just over 1 million access lines in the last year. Using the PIC change measure described in the Michigan order, one would estimate that there are about 17,000 PIC changes per business day in BellSouth's region.[46] A survey recently reported in *Communications Daily* stated that nearly 20% of residential customers would change, and an additional 17% would consider changing, local carriers; if one assumes that at least a similar proportion of business customers will change local carriers, one could estimate from this an average of roughly 18,400 to 33,600 lines per business day changing region wide.[47] Finally, the one million access lines BellSouth added in the last year would translate to roughly 4,000 access lines added per business day. In a

---

[44] *See MCI v. PacBell*, Cal. PUC No. 96-12-026 (Sept. 24, 1997), at 27, 29 (finding that MCI ceased marketing after PacBell built up backlogs of 4,000 to 5,000 orders and that, by PacBell's own admission, it's systems did not offer their competitors resold services at parity).

[45] For example, LCI states:

> In the brief time that LCI has been using BellSouth's EDI interface for ordering and provisioning, LCI has encountered excessive delays in the receipt of firm order confirmations; excessive delays in the provisioning of orders; manual processing of orders that should flow-through electronically to BellSouth's OSS; orders that have been "lost" in BellSouth's system; and substantial delays in obtaining resolution of problems due to the lack of sufficient personnel who have been adequately trained in EDI applications.

LCI Comments at ii; *see also id.* at 4-5 (for example, it has taken an average of seven days for LCI to receive FOCs).

[46] *Michigan Order* n. 494. This calculation is based on the total number of access lines in BellSouth's region and uses the figure cited in the Michigan order of at least 30 million PIC changes per year. *Id.*

[47] "Telco-Cable," *Communications Daily*, Oct. 28, 1997.

competitive environment, BellSouth will experience far greater order volumes than it is presently projecting. Moreover, as the Department and FCC have previously recognized, in sizing its systems, BellSouth cannot depend on uniform volumes but must account for, and be prepared to handle, variations in daily ordering volumes, and even significant spikes.[48] BellSouth has not demonstrated, either through actual commercial usage or even with other (less reliable) evidence such as internal testing with high volumes of test orders or third-party audits, that it can and will be able to do so.

The Commission has stated that "[a] BOC must ensure that its operations support systems are designed to accommodate both current demand and projected demand of competing carriers for access to OSS functions." *Michigan Order* ¶ 137. BellSouth states that has designed the capacity of its ordering systems based on CLEC forecasts. Stacy OSS Aff. ¶ 120. BellSouth provides projected volumes, Stacy OSS Aff. Ex. WNS-43, WNS-44, which its says incorporate available CLEC forecasts, *id.* ¶ 120. But its exhibits provide only the final numbers and do not explain the degree to which those numbers rely on CLEC forecasts or even what those forecasts are. This undercuts the Department's ability to judge the adequacy of BellSouth's showing on this point.

Finally, we are concerned that CLEC forecasts may be "constrained by . . . limitations of the BOC's interfaces or processes," DOJ Oklahoma Evaluation at 29, or by other impediments to competition, including those discussed in the Department's evaluation of this application. A BOC's wholesale support capacity should be measured against likely demand in a market that is otherwise fully open to competition.

---

[48] *See Michigan Order* ¶ 199; DOJ Michigan Evaluation, App. A at 15-16.

III. Performance Measures

Performance benchmarks are important both for demonstrating that the market is currently open to competition and for facilitating meaningful post-entry oversight that ensures that the market opening is irreversible. The BOCs must therefore define the relevant measures, gather and report the appropriate data on a regular basis, and derive the applicable benchmarks from the performance so measured. While BellSouth has made several commendable commitments with regard to gathering and storing performance data, BellSouth's proposed permanent performance measurements[49] are deficient. BellSouth omits numerous critical measurements–measurements as fundamental as average installation intervals, for example–and these omissions preclude "a determination of parity or adequacy in the provision of resale or UNE products and services to CLEC's in the state of South Carolina." Friduss SC Aff. ¶ 78.

A. System Architecture and Design

BellSouth has made several important commitments with regard to gathering and maintaining performance data. First, BellSouth's existing legacy OSSs run on multiple mainframe computers. BellSouth states that "[t] he query systems on [these] computers are not flexible and cannot be easily manipulated to produce the measurements required to monitor parity between retail and wholesale customers." Stacy Performance Aff. ¶ 13. To overcome these limitations and "enable effective

[49] Of the three categories of performance measurements that BellSouth discusses–initial measurements, AT&T measurements, and permanent measurements, *see* Stacy Performance Aff. ¶ 16–the permanent measurements are by far the most significant. Based on discussions with BellSouth, the Department understands that it is only these permanent measurements that BellSouth is committing to regularly produce on an ongoing basis for CLECs and regulatory authorities. As stated above, one important purpose of performance measurements is to detect backsliding and thus facilitate meaningful post-entry oversight that ensures that the market opening is irreversible. The Department sees no basis for concluding that performance measurements not regularly produced and generally available on an ongoing basis will serve this important function.

ongoing production of measurements which monitor parity and provide meaningful data on a readily available basis." BellSouth has implemented a data warehouse, separate from the mainframe computers on which its OSSs run, in which raw data relating to performance can be stored and through which it can be queried to produce performance measurements. *Id.* ¶¶ 13, 14. The flexibility that can result from this type of architecture should make it easier for BellSouth to develop, maintain, and provide effective performance measurements.

Second, BellSouth states that it is capturing and storing in the data warehouse for subsequent analysis "[e]very order processed by BellSouth for both its retail units and its CLEC customers." *Id.* ¶ 14. The use of sampling can result in numerous disputes as to the statistical validity and thus the adequacy of the sampling technique, and poor sampling techniques can readily distort the view of the performance being measured. Therefore, storing data for all orders is obviously a more desirable approach than storing data for only a limited sample of orders.[50]

Third, BellSouth states that it plans to allow CLECs to directly access the data warehouse to perform their own analyses. *Id.* ¶ 15. BellSouth has not described exactly how CLECs would access the data warehouse or what types of data each CLEC would be able to access. Allowing a CLEC to access, not only data relating to itself, but also summary CLEC data and summary BellSouth data could provide CLECs a flexible tool for generating their own performance measures. The greater

---

[50] BellSouth has not, however, described what data it will track other than for orders. More generally, BellSouth has not listed the data elements that are being stored in the data warehouse. As a result the Department cannot ascertain exactly what performance measures BellSouth will be able to support using the data maintained in its data warehouse and thus cannot judge the adequacy of BellSouth's implementation of the data warehouse. The Department encourages BellSouth, as well as other BOCs that implement a data warehouse for performance measures, to identify and describe in future applications the complete list of data elements stored in such data warehouses.

degree of disaggregation that the data warehouse will support, *see* Friduss SC Aff. ¶¶ 31-34, the more powerful and useful this tool will be.

BellSouth is to be commended for committing itself to such a system for gathering, storing, and providing access to performance data. While the information that BellSouth has provided is not sufficient to judge the status or the adequacy of its implementation, BellSouth's approach is clearly a desirable one, and the Department strongly supports these commitments. We urge other BOCs to adopt a similar approach.

B. Actual Installation Intervals

Notwithstanding this desirable architecture, BellSouth's proposed permanent performance measurements fall considerably short of what is needed. Most significantly, BellSouth is not providing actual installation intervals, instead relying on a measurement of the percentage of provisioning appointments met. As described below, the Department and the Commission have previously determined that this measurement is an inadequate substitute. For this reason alone, BellSouth has failed to satisfy its evidentiary burden to "demonstrate that it is provisioning resale orders within the same average installation interval as that achieved by its retail operations." *Michigan Order* ¶ 166.

As the Department and the Commission have previously concluded, "[p]roviding resale services in substantially the same time as analogous retail services is probably the most fundamental parity requirement in Section 251."[51] In discussing this issue, the Commission has explained that an ILEC that "to a significant extent, [processes] retail orders for itself more quickly than it is processing

[51] DOJ Michigan Evaluation at A-12, quoted with approval in *Michigan Order* ¶ 167.

resale orders for competitive carriers . . . would not be meeting its obligation to provide equivalent accessed to those OSS functions" and that average installation intervals are critical to determining whether nondiscriminatory access is being provided. *Michigan Order* ¶ 167, 168. Accordingly, in the Michigan Order, the Commission concluded:

> [W]e find that submission of data showing average installation intervals is fundamental to demonstrating that Ameritech is providing nondiscriminatory access to OSS functions. Such data is direct evidence of whether it takes the same time to complete installations for competing carriers as it does for Ameritech, which is integral to the concept of equivalent access. By failing to provide such data in this application, Ameritech has failed to meet its evidentiary burden.

Michigan Order ¶ 171. The same reasoning applies equally to BellSouth and yields an identical conclusion with respect to BellSouth's current application.

Contrary to BellSouth's assertions, Stacy Performance Aff. ¶ 52, a measurement of the percentage of provisioning appointments met does not adequately describe BellSouth's performance: it does not permit direct comparisons to BellSouth's retail performance and thus is not sufficient to demonstrate parity, even if when combined with data demonstrating that provisioning appointments are being assigned on a non-discriminatory basis.[52] Fundamentally, a report that shows the side of the line on which an order falls, either met or missed, does not reveal where it is in the range.[53] As to provisioning appointments met, if all CLEC customers receive service on the due date while all

---

[52] While BellSouth purports to provide "data on actual intervals for provisioning various services," Stacy Performance Aff. ¶ 52, an examination of the data cited, Exhibit WNS-10 to that affidavit quickly reveals that is not the case. The charts are clearly labeled "Issue to Original Due Date Intervals" or "Issue to Due Date Average Interval." At best, due date intervals can show that BellSouth is assigning due dates to CLECs and itself on a non-discriminatory basis. While this is important, this is not the same as an installation interval.

[53] The difference is similar to whether a college course is graded with a letter grade such as A, B, C, D, or F or merely on a pass/fail basis. Pass/fail grades do not reveal where passing students stand with respect to one another in the class.

BellSouth retail customers receive service in half the scheduled time, then a report of provisioning appointments met will show parity of performance, not revealing the discriminatory difference in performance between BellSouth and the CLEC. Likewise, as to provisioning appointments missed, if all BellSouth retail customers receive service after one additional day while all CLEC customers receive service after five additional days, then a report of provisioning appointments met will again show parity of performance and fail to reveal the discriminatory difference.

C. Other Missing Measures

As described in the Friduss affidavit, BellSouth's permanent performance measures are missing numerous other significant measurements. For example, BellSouth has no measurements for pre-ordering functions, and it has few measurements for ordering functions. Other significant missing significant measurements include Service Order Quality, Orders Held for Facilities; Billing Timeliness, Accuracy, and Completeness; and 911 Database Update Timeliness and Accuracy.[54] Thus, BellSouth has yet to establish sufficient performance measurements to satisfy the Department's competitive assessment.[55]

Notably, a number of these missing elements are among those listed in the Michigan Order as necessary parts of a BOC's evidentiary showing. The Commission found that Ameritech had failed

[54] In discussions with the Department, BellSouth has indicated that some omitted measurements are under consideration but have not yet been adequately defined at this point. In this regard, the Department reiterates that for performance reports to be meaningful and useful, the relevant measures must be specifically and clearly defined. Without such definition, the reports will be meaningless if not actually misleading to a CLEC or regulator. "For example, cycle-time performance measures are dependent on the specific definition of start and stop times, while reliability measures are dependent on the specific definition of what constitutes a failure." Friduss SC Aff. ¶ 23.

[55] As we have noted previously, we are open to considering alternate measures for assessing wholesale performance; we are not, however, able to conclude that a local market has been fully and irreversibly opened unless the important indicators of wholesale performance are being measured and reported on a regular basis.

to meet its "fundamental duty with regard to the evidentiary burden required to demonstrate that it is providing nondiscriminatory access to all OSS functions," *Michigan Order* ¶ 204, and concluded:

> [I]n order to provide us with the appropriate empirical evidence upon which we could determine whether Ameritech is providing nondiscriminatory access to OSS functions, Ameritech should provide, as part of a subsequent section 271 application, the following performance data, in addition to the data that it provided in this application: (1) average installation intervals for resale; (2) average installation intervals for loops; (3) comparative performance information for unbundled network elements; (4) service order accuracy and percent flow through; (5) held orders and provisioning accuracy; (6) bill quality and accuracy; and (7) repeat trouble reports for unbundled network elements.

Michigan Order ¶ 212 (footnotes omitted). As stated above with respect to average installation intervals, the Commission's reasoning on these other performance measurements applies equally to BellSouth, and thus the omission of these measurements warrants an identical conclusion with respect to the inadequacy of this application.

EXHIBIT 2

Supplemental Affidavit of Marius Schwartz on Behalf of the U. S. Department of Justice

THE "OPEN LOCAL MARKET STANDARD" FOR AUTHORIZING BOC INTERLATA ENTRY: REPLY TO BOC CRITICISMS

by

MARIUS SCHWARTZ

Supplemental Affidavit on behalf of U.S. Department of Justice

November 3, 1997

TABLE OF CONTENTS

Professional Background

1. My name is Marius Schwartz. I am a Professor of Economics at Georgetown University. I received my B.Sc. degree with first-class honors from the London School of Economics and my Ph.D. in economics from the University of California at Los Angeles. My research areas are in industrial organization, antitrust and regulation. I have published on these subjects and have taught courses in these areas to students and to executives and government officials in the U.S. and other countries.

2. From April 1995 to June 1996, I was the senior staff economist at the President's Council of Economic Advisers responsible for antitrust and regulated industries. Much of my work was on regulatory reform in telecommunications, and I participated in the development of the Administration's policy leading up to the enactment of the 1996 Telecommunications Act. From 1980 to the present, I have served intermittently as a consultant to the Antitrust Division of the Department of Justice on a variety of competition matters. I have also consulted for international agencies and private companies. My curriculum vitae is attached as Exhibit 1.

3. I submitted an affidavit to the Federal Communications Commission on behalf of the U.S. Department of Justice ("DOJ") in connection with the application by SBC to provide interLATA services in Oklahoma, and of Ameritech to provide such services in Michigan.[1]

---

[1] Affidavit of Marius Schwartz, "Competitive Implications of Bell Operating Company Entry into Long-Distance Telecommunications Services," May 14, 1997, filed with the FCC as an appendix to the Department of Justice's evaluation of SBC's application to provide interLATA services in Oklahoma, May 16, 1997 (In the Matter of Application of SBC Communications, Inc. Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Services in Oklahoma, CC Docket 97-121), and of Ameritech's application in Michigan, June 25, 1997 (In the Matter of Application of Ameritech Michigan Pursuant to Section 271 of the Telecommunications Act of 1996 to Provide In-Region, InterLATA Services in the State of Michigan, CC Docket 97-137). The affidavit is available on the Internet at: *www.usdoj.gov/atr/statements/Affiwp60.htm*.

Scope and Purpose of This Affidavit

4. My original affidavit analyzed the competitive implications of authorizing BOC in-region interLATA entry and explained why the Department of Justice's Open Local Market standard for authorizing such entry ("DOJ standard" or "Open Local Market standard") is economically sound. That standard requires the local market in the applicant BOC's state to have been fully and irreversibly opened to competition through all three entry modes envisioned by the Telecommunications Act—facilities based, resale, and unbundled network elements.

5. The most reliable demonstration of such opening is observing meaningful local entry of all three modes. Failing that, one looks to verify that the main conditions for an open market are in place. These are: (1) meaningful implementation of the competitive checklist items, notably establishment of the various new wholesale systems (such as Operations Support Systems) and network unbundling needed to facilitate local competition, and demonstration—over a duration sufficient to yield useful performance benchmarks—that these systems are capable of functioning under real business conditions and of being scaled up appropriately to accommodate entrant demand; (2) assurance that BOC prices for inputs needed by local entrants (interconnection, unbundled network elements) will remain reasonable and cost based after BOC interLATA entry is approved; and (3) the absence of major state or local regulatory barriers or any other barriers likely to significantly impede competition.

6. This standard has since been criticized by both BOCs and IXCs. From the IXC end, the standard is criticized as too permissive. It allegedly understates the danger that premature BOC entry poses to competition in the long-distance market by overstating the efficacy of regulatory safeguards, and therefore errs in not requiring effective local competition as a prerequisite for authorizing BOC entry.[2] As I explained, however, effective local competition—while it may be the appropriate standard for complete deregulation—is an overly stringent standard for allowing BOC entry subject to ongoing regulatory and antitrust safeguards. (Schwartz Affidavit, ¶¶ 150-153.) Such safeguards

---

[2] See, e.g., Comments of MCI Telecommunications Corporation, CC Docket No. 97-137 (June 10, 1997) and Reply Comments of MCI Telecommunications Corporation, CC Docket No. 97-121 (May 27, 1997).

will remain available after BOC entry is authorized.

7. The more numerous criticisms have come from the other end: the BOCs and their economic experts argue that the standard is too restrictive and unworkable. The present affidavit addresses those criticisms.[3]

I. WHY BENEFITS FROM THE "OPEN MARKET STANDARD" ARE LIKELY TO SUBSTANTIALLY OUTWEIGH THE COSTS

8. Rather than respond to the BOC experts individually, I focus on their main criticisms of the DOJ standard—as they portray it:

(a) *The standard needlessly delays BOC interLATA entry.* Such delay is not necessary to advance local competition and may retard local competition—by giving IXCs strategic incentives to hold back from aggressively entering local markets for fear that doing so would hasten approval of BOC entry. (Kahn and Tardiff Reply Aff., ¶¶ 62, 64.)

(b) *The standard is overly regulatory and involves micro-management by the DOJ.* (Kahn and Tardiff Reply Aff., ¶ 65.) Rather than letting competition determine market outcomes, it requires actual success of competitors to demonstrate that the market is open. For example, it requires metric tests of local competition—a BOC

---

[3] See, e.g., in the Oklahoma proceeding, Reply Affidavit of Alfred E. Kahn and Timothy J. Tardiff on behalf of SBC, May 20, 1997 ("Kahn and Tardiff"), and SBC's Response to DOJ's Evaluation, May 27, 1997 ("SBC Response"). In the Michigan proceeding, see: Reply Affidavit of BellSouth in support of Ameritech's application ("BellSouth Reply, Michigan"), July 7, 1997, and the appended Declaration of Jerry Hausman ("Hausman 1"); and the following submissions on behalf of Ameritech: Affidavit of Robert Crandall and Leonard Waverman, April 11, 1997 ("Crandall and Waverman") and Reply Affidavit, July 3, 1997 ("Crandall and Waverman Reply"); Reply Affidavit of Richard J. Gilbert and John C. Panzar, July 2, 1997 ("Gilbert and Panzar"); and Reply Affidavit of Paul W. MacAvoy, July 2, 1997 ("MacAvoy"). In the application by BellSouth in South Carolina, see: Affidavit of Richard J. Gilbert, September 30, 1997 ("Gilbert"); Declaration of Jerry A. Hausman, September 30, 1997 ("Hausman 2"); and Declaration of Richard L. Schmalensee, September 30, 1997 ("Schmalensee"), all on behalf of BellSouth.

must lose a certain number of customers in order to prove that new wholesale support systems work. (SBC Response, at 13.) And it requires observing all three entry modes—through own facilities, unbundled elements, and resale—in order to prove that market is open to all these three modes. (Gilbert and Panzar Reply Aff., ¶ 9.)

(c) *The costs resulting from the delay of BOC entry caused by the restrictive DOJ standard are huge and outweigh any benefits.* All BOC experts referenced in footnote 3 make this claim, explicitly or implicitly. For example, Professor Kahn and Dr. Tardiff assert: "Perhaps most fundamentally, Professor Schwartz's conclusion that the benefits from delay outweigh the cost is speculative...he has provided no basis whatever for an objective assessment of the comparative benefits or losses..." (Kahn and Tardiff Reply Aff., ¶ 65.)

9. Let me begin by refuting the last and most important point. It is true that my affidavit did not attempt to explicitly quantify the benefits or costs of delayed BOC entry. While I am sympathetic to attempts by some BOC experts to try and quantify such effects, forecasts are only as good as their underlying assumptions. Given the tremendous uncertainty involved in the case at hand, forecasting exercises are inherently speculative. Moreover, as I will show in Part II of this affidavit, some forecasts of the benefits of BOC entry produce the illusion of precision, when in fact they hinge on dubious assumptions that cause the estimates of the benefits to be grossly inflated.

10. Instead of speculative forecasting, my affidavit highlighted transparent and robust factors which are likely to ensure that, under a range of plausible assumptions, the benefits of delaying BOC entry as necessary to implement the key measures needed to open local markets will significantly outweigh the costs. To reiterate my argument, these key factors are as follows:

Different current conditions in the local and interLATA markets

A. The "local market" refers to the full set of services that require access to LECs' underlying local network facilities, including basic local service, exchange access, and "vertical" services. The local market, so defined, is considerably larger than the interLATA market. In addition, the local market is a regulated monopoly rife with distortions, while the long-distance market is far more competitive. For both reasons, the scope for improving economic performance by increasing the degree of competition is considerably greater in the local market than in long distance.

Differential impact of Open Market Standard on competition in the two markets

B. The standard would advance local competition much more rapidly and efficiently than would a weaker entry standard that did not insist on significant BOC cooperation as a condition for opening local markets but instead relied largely on post-entry measures.

C. In contrast, the standard need not impose a significant delay of BOC interLATA entry. The extent of delay in BOC entry is largely under BOC control and in most cases could be modest if the BOCs cooperate in implementing the measures required by the Act as important for facilitating local competition.

11. In short, the above logic implies that adhering to the Open Market Standard rather than a more permissive alternative will yield large benefits in advancing local competition at the expense of comparatively modest and short-lived costs in the long distance market; moreover, authorizing BOC entry while failing to open local markets to competition could over time pose growing risks also to long distance competition.

12. This logic also addresses BOC criticisms that delaying BOC entry imposes intolerable costs

by delaying the availability of integrated services—the provision by a supplier of local and long distance services (and perhaps other services as well). It is widely acknowledged that integrated services are valuable to consumers (e.g., one-stop shopping) and can reduce retailing costs for suppliers, and I noted in my initial affidavit that delaying BOC interLATA entry and thus BOCs' ability to offer such services comes at a cost. But this cost is short lived, and is outweighed by the benefit: instead of leaving provision of integrated services as a monopoly of the local BOC, opening the local market enhances the ability of all other providers to compete for providing integrated services. Therefore, if one views integrated services as important, then permitting broad competition in their provision—by making currently monopolized local inputs and services widely and efficiently available to competitors—should be a central goal of good public policy.

13. The remainder of Part I of this affidavit elaborates on points A through C above. In so doing, it addresses the previously mentioned BOC criticisms, and corrects some misconceptions about the DOJ's Open Market Standard and its implementation. Part II examines more closely some inflated claims about foregone benefits in the long distance markets from delaying BOC entry. Part III concludes that the DOJ Standard indeed is likely to advance the competition goals of the Telecommunications Act more effectively than would a more permissive entry standard..

A. The Larger Potential Gains from Increasing Competition in the Local Market Than in the InterLATA Market

14. My affidavit discussed at length the potentially significant benefits of BOC entry. (Schwartz Aff., ¶¶ 7, 59-61, 82-98.) I noted that these benefits might include: enabling the BOCs to realize savings on retailing costs by jointly offering local and long-distance services; providing consumers the benefits of one-stop shopping and other integrated services (such as new bundles of services); and increasing the degree of competition in long-distance markets. Indeed, various BOCs and their experts have quoted my affidavit extensively on this point, as supposedly confirming that the DOJ standard imposes intolerable costs by delaying the realization of such efficiencies. This inference, however, is incorrect: one must consider not only the costs that the DOJ standard might impose relative to a more permissive standard, but also its benefits in promoting local competition.

15. The goal of the 1996 Telecommunications Act is to open *all* markets to competition. This includes, in particular, the local market which is both much larger than long-distance and is currently the least open to competition. It is important not to lose track of this point—the key bottleneck that needs to be unclogged is in the local market. As I explained in my affidavit, an appropriate standard for BOC interLATA entry can play a key role in advancing the Act's local competition objectives: incumbents' cooperation is vital in opening local markets, and cooperation will be secured more effectively through a Section 271 standard that conditions entry on the prior implementation of key market-opening measures.

16. Thus, in evaluating the DOJ standard it is imperative to address the benefits from permitting accelerated development of competition in local services, and therefore also in integrated services—whose provision requires access to the currently-monopolized local services and inputs of LECs. It is bad policy to consider only the possible costs of delaying BOC entry, without recognizing the tradeoff involved. The remainder of this Section A explains why the potential benefits of increasing competition in the local market are so much greater than the potential losses in the long distance market from delaying BOC entry. Unfortunately, BOC experts are silent on the benefits of local competition, or even contend that the Open Market standard for BOC interLATA entry can play no major role in fostering local competition and could even retard it. I refute these claims in Section B, and in Section C, I refute the claims that the delay in BOC entry is likely to be unduly long.

1. The Local Market Is Much Larger

17. Some BOC experts as well as other commentators frequently refer to the "$76 billion long-distance market." This is an unfortunate exaggeration: in 1995, long-distance carriers' revenues were $76 billion ($73 billion was from interLATA services, including international), but $26 billion was paid to the BOCs and other incumbent local exchange carriers (LECs) in access charges. Including these access charges for interLATA and intraLATA toll calls, LECs' total revenues exceeded $100 billion. (Schwartz Aff., ¶ 31 and Table 1.) In revenue terms the local market is

therefore about *twice as large* as long-distance.[4] The local market is also considerably larger by various other measures, *e.g.*, employment and embedded capital. Thus, the markets from which BOCs are temporarily precluded—interLATA services—are considerably smaller than the local markets which we are attempting to open to competition. The same *percentage* improvement in economic performance in both markets in response to increased competition would therefore generate considerably greater *total* benefits in the local market.

2. The Local Market is Largely a Regulated Monopoly, While the InterLATA Market Is Substantially More Competitive

18. Putting aside the much larger size of the local market, there is much more room to improve economic performance in the local market than in the interLATA market by fostering additional competition—because of the different current competitive conditions in the two markets. The interLATA market is substantially more competitive (though certainly not perfectly competitive) and largely unregulated. Moreover, absent consolidation, long-distance competition will continue to increase even without BOC entry. By contrast, the local market is largely a regulated monopoly rife with distortions. The fundamental tenet of the Telecom Act is that, as a vehicle for delivering good economic performance, competition is far superior to regulated monopoly. Thus, even a modest dose of increased competition in the local market can be expected to generate major benefits—in the form of reduced costs, improved quality, increased variety of offerings, rationalization of the price structure in local markets, as well as spillover benefits in adjacent markets for interexchange and integrated services.

19. The BOCs' own experts, in justifying their estimates of the gains that BOC entry would bring

---

[4] In 1996, long-distance carriers' revenues rose to $82 billion, and $58.4 billion net of access charges (compared to $50 billion in 1995). Federal Communications Commission, *Preliminary Statistics of Communications Common Carriers*, at Tables 1.4, 2.9 (1997). Total LEC operating revenues were, according to Table 2.9, $100.7 billion ($78.7 billion for the BOCs). The FCC's *TRS* data, however, which was used in computing Table 1 of my earlier affidavit, would likely give the LECs a higher revenue in 1996 than the $100.7 billion reported by *SCCC* (in 1995, *TRS* put LECs' revenue at the $102.8 billion cited in my Table 1, while the *SCCC* put it at only $95.6 billion.) Thus, the two-to-one revenue relationship between the local and long distance markets is approximately preserved in 1996.

by stimulating interLATA competition, identify substantial benefits that increased competition has brought in other industries. Dr. Robert Crandall and Professor Leonard Waverman, in their affidavit on behalf of Ameritech in Michigan (April 1997), survey the effect of increased competition in several previously tight oligopolies (in their view): the U.S. luxury car market; the U.S. carbon steel industry the U.K. mobile telecom market; long distance telecom services in Chile; and interLATA and intraLATA services in Connecticut. In all cases they report impressive gains in economic performance.

20. For example, Japanese entry into the U.S. luxury car markets in the early 1990s led to "quality improvements and innovation..." by all producers (Crandall and Waverman Aff., ¶¶ 19). Competition by steel producing minimills in the U.S. led them to cut prices by about 20% more than the dominant vertically integrated steel producers for "long" products (such as rebars and wire rods) in the 1970s and early 1980s (*id.*, ¶ 27); and served to reduce industry prices for sheet steel products between 1970-1994 by about 9% (*id.*, ¶ 31). Entry by two additional cellular providers into the previous U.K. duopoly since 1993 stimulated innovation in pricing, such as the introduction of "location pricing" (*id.*, ¶ 39) and reduced the effective rate per minute (total fixed and variable charges averaged over the number of minutes) paid by business subscribers in peak periods by about 32% (*id.*, ¶¶ 40-41). In Chile, liberalization was introduced in 1994 and "[b]y September 1996, average long distance rates had fallen by more than 50 percent. . ." (*id.*, ¶ 48). And the entry of SNET into interLATA (interstate) services in Connecticut in 1994 "has resulted in effective reductions in intrastate toll rates of at least 10 percent per year" (*id.*, ¶ 58) as AT&T responded by cutting its intrastate rates rather than interstate rates, which are subject to national geographic averaging requirements. (The SNET experience is discussed further in Part II of this affidavit.)

21. I agree wholeheartedly that increasing competition in an industry is likely to deliver substantial economic benefits to consumers. My only quarrel on this score with BOC experts is this: if additional competition can deliver such impressive gains in oligopolies, why do they not expect even greater benefits from stimulating competition in local BOC markets that today are largely *monopolies*?

22. The objection that fewer gains can be expected because BOC prices are regulated, and in some cases are set perhaps even below incremental cost (e.g., for basic residential service at least in rural areas), is not persuasive. The very premise of the Telecommunications Act is that regulated

monopoly is a vastly inferior institution to competition. The gains from competition can be expected to come from the usual stimulus that competition provides to improve productivity and thereby cut cost; to offer innovative products and services (including new pricing options for existing services); and to improve quality. These benefits can be expected to be at least as large in local telecommunications markets that are starting from a position of far less competition than many if not all the examples cited by Crandall and Waverman. Moreover, competition can deliver still further gains, by reducing the need for cumbersome regulation that can reduce firms' incentives to operate efficiently and their flexibility to do so.

23. While these gains may not show up, at least initially, in lower prices for particular services whose prices are being held below incremental costs (such as may well be the case for basic residential service in some places), competition will deliver substantial benefits overall. *Lower prices* will emerge for services that today are substantially overpriced, thereby benefitting consumers as well as increasing overall welfare by stimulating usage of such services. Such over-priced services include: intraLATA toll; "vertical" services (caller ID, call waiting); high speed lines such as ISDN (in some states); and exchange access for interLATA services. Moreover, as universal service subsidies become competitively neutral and available to entrants and not solely to incumbent LECs, competitive forces should enhance efficiency also in the provision of the currently under-priced services. Consumers will enjoy *better customer service* (such as 24 hour customer service currently offered by IXCs, as opposed to nine-to-five hours offered by many LECs). And consumers will benefit from expanded options of products and services. Indeed, the BOCs themselves have acknowledged that competition from Competitive Access Providers have prompted the BOCs to upgrade their own offerings.[5]

24. Professor David Newbery reports some revealing statistics about the scope for improved productivity that competition can spur.[6] British Telecommunications (BT) was privatized in 1984,

---

[5] "This competition (from CAPs) was driving the Bell companies to lower the price *and raise the quality* (emphasis added) of their local exchange services even before the 1996 Act." Joint Response of Bell Atlantic and US West to letter from then acting Assistant Attorney General Joel Klein, December 13, 1996, 32-33.

[6] David M. Newbery, "Privatization and Liberalization of Network Utilities," Presidential Address to the Eleventh Annual Congress of the European Economic Association, Istanbul, August 22, 1996, available as Working Paper No. 9620, Department of Applied Economics, University of Cambridge. See also OFTEL,

but there was little change in its rate of growth of productivity relative to UK manufacturing as a whole after privatization until the entry of a large number of new competitors after the "Duopoly Review" in 1991, which allowed additional entry into long distance (beyond the initial BT and Mercury duopoly), and competitive facilities entry into local markets. Professor Newbery's work suggests that the ratio of BT's productivity per worker relative to that of the UK manufacturing industry rose only a few percent from 1984 to 1991, but about 30 percent from 1992 to 1995.[7]

25. In short, economic theory as well as evidence from other industries lead one to expect substantial gains from introducing more competition into today's heavily regulated and predominantly monopoly local markets, and a subsequent move towards more light-handed regulation. Indeed, the emergence of competition could permit greater efficiencies also from BOC interLATA entry, by making it appropriate to reconsider the design of safeguards such as strict separate affiliate requirements (§ 272) that are deemed necessary in a less competitive environment but that entail certain inefficiencies. Thus, large improvements in economic performance are likely to flow from the accelerated development of local competition made possible by appropriately conditioning BOC interLATA entry on prior implementation of market-opening measures.

Consultative Document, Pricing of Telecommunication Services from 1997, Annex B, Table B2(a) (1997).

[7] Newbery's Figure 3 also shows that even more dramatic acceleration in the rate of productivity growth was observed in the *electricity* sector, following its privatization—which was coupled with the introduction of competition in both the generation and supply functions (but not transmission or local distribution). Since privatization of BT was not by itself sufficient to generate large productivity improvements, a reasonable inference is that a large part of the gains in electricity also can be attributable to the advent of competition.

B. The Open Market Standard Advances Local Competition More Rapidly and More Efficiently Than Would a Weaker Entry Standard

26. BOC experts maintain that the Open Market Standard may delay local competition; that one could and should permit BOC interLATA entry and rely on post-entry safeguards against BOC conduct to open local markets; and that the Standard entails unnecessary intrusive regulation. This section rebuts these contentions. Subsection 1 addresses claims that the Standard induces potential entrants to strategically delay their own entry into local markets. Subsection 2 explains that local entry requires not only incentives but also ability, and that the ability of entrants to enter rapidly and efficiently hinges on incumbents' cooperation. Subsection 3 notes the dangers of relying primarily on post-entry enforcement to secure opening of local markets, rather than requiring sufficient market opening measures as a precondition for authorizing BOC interLATA entry. Subsection 4 explains why, by insisting on such measures as a precondition, the Open Market Standard will ultimately *reduce* the need for intrusive regulation.

1. Alleged Incentives for Strategic Delay by Local Entrants

27. BOC experts argue that authorizing BOC interLATA entry is likely to accelerate rather than delay local competition, by removing the alleged incentive of the major IXCs to strategically postpone their own local entry for fear that it would trigger approval of BOC interLATA entry. Indeed, various BOC experts cite this strategic incentive rather than BOC-mounted barriers as the main cause of the slow development of local competition. This argument is erroneous for several reasons.

28. First, the Open Market Standard does not require local entry by IXCs. Indeed, the DOJ has made clear that its standard does not require entry by any particular competitor.[8] As explained in Section C below, the extent and diversity of actual local competition that is observed does establish—and properly so—important presumptions for whether the market indeed is open. But the standard recognizes that lack of entry may be due to independent business decisions unrelated to

---

[8] See DOJ Oklahoma Section 271 Evaluation at 41, 48-50.